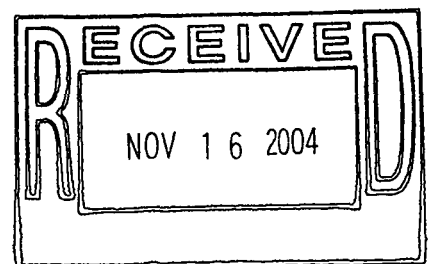


**Final Closure Plan for the New Sanitary Landfill
At Rocky Flats Environmental Technology Site (RFETS)**

U.S. Department of Energy
Kaiser-Hill Company, LLC
Rocky Flats Environmental Technology Site
October 9, 2002



ADMIN RECORD

BZ-A-000761

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1.0 INTRODUCTION

1.1 Purpose and Scope

Colorado Department of Health and Environment (CDPHE) regulations, 6 CCR 1007-2, Part 258, Sections 3.5 and 3.6, address closure of solid waste disposal sites. The regulations outline closure and post closure requirements for landfills that have received waste.

This closure plan supplements the Application for Certificate of Designation (CD), as approved on September 27, 1994, in regards to closure and post closure activities of the "New Sanitary Landfill" located in the north-west area of the site. The activities outlined in this closure plan address the landfill area, the associated leachate pond, and the associated below grade piping for the leachate collection system, which have never been used for disposal of waste.

1.2 Schedule

In accordance with the regulations, closure of the landfill will not be initiated until 60 days after CDPHE has received written notification concerning closure activities. The actual date for starting closure activities has not been identified, but it is anticipated to occur in fiscal year 2003. The Division will be notified of each phase of closure activities and will be offered an opportunity to inspect the site before backfilling occurs.

1.3 Facility Contacts

The contacts for this closure activity at RFETS are:

Assistant Manager
For Environment and Infrastructure
Rocky Flats Field Office
U.S. Department of Energy
10808 Highway 93, Unit A
Golden, CO 80403-8200
(303) 966-4298

Environmental Manager
Remediation, Industrial D&D,
and Site Services
Kaiser-Hill Company, L.L.C.
10808 Highway 93, Unit B
Golden, CO 80403-8200
(303) 966-6386

2.0 SPECIFIC CLOSURE ACTIVITIES

Closure and post closure stipulations were submitted to CDPHE in the 1994 CD. When the CD was submitted it was the intention of the Site to use the sanitary landfill; however, the landfill has never been used for the disposal of waste. Therefore, alternative closure activities as outlined in this closure plan will be conducted.

The CD addressed the fabrication of an operational cover that allows settlement of waste placed into the landfill and the placement of a final cover over the operational cover. Since waste was never placed into the landfill, neither an operational nor a final cover will be installed.

Currently, the landfill and leachate pond liners are still in place. It is intention of Kaiser-Hill (K-H) to leave the liners in-situ and either shred or punch holes in the liners thereby rendering them incapable of retaining precipitation or inhibiting the free flow of surface and groundwater. The clay below these liners will be augured or scarified and filled with sand in order to prevent ponding. If shredded, the PVC liner should not overlap in any areas and the material should be cut into manageable strips and disked into the ground.

The tires and top ultraviolet (UV) liner will be removed and appropriately managed as waste, being sent off site for disposal. The areas of the landfill and leachate pond will then be backfilled in such a manner that a minimum of 85% compaction rate is achieved. This compaction rate will ensure that subsidence does not occur.

After backfilling of the landfill area is completed, approximately six to nine inches of native topsoil will be placed in order for the area to be revegetated compatible with the US Fish and Wildlife Service plans for the area. The final grading of the landfill site will be contoured to match the surrounding topography, which will be consistent with the final land configuration plans as contemplated by Rocky Flats Cleanup Agreement (RFCA).

All structural material within three feet of the existing grade, including liner material, will be removed or will be covered by a minimum of three feet of fill. The main pipelines appurtenant to the landfill and pond are situated below three feet of the existing grade and will be sealed by either grouting or foam, and left in place. Any pipelines that rise above the level of three feet will be cut off at the level of three feet or below and removed, and the remaining pipe below three feet will be sealed.

2.1 Preparation of Engineering and Work Packages

The RFETS Health and Safety Practices Manual defines general health and safety measures to be followed at the Site. Closure activities will be conducted in accordance with this manual or a Project Health and Safety Plan (HASP) that includes hazard identification and evaluation. Standards for industrial safety for the closure activities are found in 29 CFR 1910 and 1926 as well as DOE Orders implemented through the relevant procedures of the RFETS Health and Safety Practices Manual.

The work package used to control work will require compliance with all applicable federal, state, and local regulations in effect at the time the work is actually performed. This will include requirements for personal protective equipment, methods of liner perforation, and methods for backfilling and compaction.

2.2 Control of Emissions

Some of the following methodologies may be used to control fugitive dust:

- Controlled water spraying will be used to minimize fugitive dust emissions during closure activities;

- Any debris (i.e., tires or UV liner) will be loaded into roll-off containers and covered to prevent fugitive dust emissions;
- Closure activities will be terminated during periods of high wind to control fugitive dust;
- Dust control devices or shrouds may be used on individual equipment. Water will be applied in a controlled manner to manage dust without resulting in excess ponding or runoff (e.g., fogging).

Closure activities may include the operation of heavy equipment, vehicles, and similar equipment. Although emissions from equipment will not generate sufficient criteria emissions to affect National Ambient Air Quality Standards, temporary stationary fossil fuel-fired equipment use (or fuel use) will need to be tracked to ensure emissions remain within permitted limits, or that appropriate notices or permit modifications are filed. In addition, opacity will be limited to below 20 percent.

2.3 Monitoring Well Care

All groundwater-monitoring wells around the landfill area will be located with assistance from the Groundwater Monitoring group. These wells will be marked in some manner to denote their location and to prevent their disturbance or damage during the closure activities. If the wells are in close proximity to areas where heavy equipment will be employed, some manner of barricade will be erected to prevent damage to the monitoring well. If a monitoring well was to be damaged during closure activities, it will be the responsibility of the closure project to pay for such repairs, as the Groundwater Monitoring group deems necessary.

3.0 POST-CLOSURE CARE

Post closure care will be conducted in accordance with site wide environmental restoration activities and are outlined as follows:

- Leachate and methane gas monitoring will not be performed since neither will be produced;
- Subsidence, erosion, seeding quality, and ponding will be monitored for two years following closure, pursuant to the following schedule: quarterly during the first year and semi-annually during the second year;
- In the remaining years until site closure, observations for subsidence, ponding, and erosion will be made every other year; thereafter, the area will be monitored consistent with the Site's land configuration and long term stewardship plans;
- Surface water and air quality monitoring will not be required in this area since the landfill was never used for waste disposal. As described in the Integrated Monitoring Plan monitoring of surface water, groundwater and air quality will be conducted for the site as a whole, but not specific to the new landfill location; and
- Visual inspections of landfill cells and additional environmental monitoring of the landfill area will not be required.

4.0 RECORDKEEPING

The following closure records will be maintained on Site during closure activities and at a federal repository for a minimum of 30 years following the report of closure:

- Work instructions used to conduct closure activities and documentation verifying closure activities were conducted in accordance with this Closure Plan.
- Photographs including pre-closure conditions, closure activities, and post-closure condition.

Records will indicate the location of all pipelines and structures remaining in the ground.

5.0 REFERENCES

1. Code of Colorado Regulations, Vol. 6, and No. 1007-2.
2. Application for Certificate of Designation, Section 8.0, submitted September 1994.

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